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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/840,722 | 04/23/2001 | Michael C. MacLeod | UTSC:607USC1 | 5071 |

7590 09/12/2006

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| EXAMINER | |
|---|---|
| LU, FRANK WEI MIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1634 | |

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/840,722 | MACLEOD ET AL. | |
| | Examiner | Art Unit | |
| | Frank W Lu | 1634 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *20 June 2006*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *3,4,20,21,23-29,36-42,44-48,50,52-76,85 and 86* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3,4,20,21,23-29,36-42,44-48,50,52-76,85 and 86* is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 April 2001* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *8/24/2006*.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: (1) There are several nucleotide sequences with more than 10 nucleotides in Figure 4. However, there are no SEQ ID Nos for these nucleotide sequences in the Figure 4 or BRIEF DESCRIPTION OF THE DRAWINGS; and (2) there is a nucleotide sequence with more than 10 nucleotides in Figure 8. However, there is no SEQ ID No for this nucleotide sequence in the Figure 8 or BRIEF DESCRIPTION OF THE DRAWINGS and there is no description for sequence locations for this nucleotide sequence.

Appropriate correction is required.

### *Sequence Rules Compliance*

2. There are several nucleotide sequences with more than 10 nucleotides in Figures 4 and 8. However, these nucleotide sequences are not in the sequencing listing submitted on April 23, 2001. Applicant is required to resubmit a new sequencing listing on both paper copy and computer readable form in order to comply with the requirements of 37 CFR 1.821 through 1.825.

### *Examiner's Amendment*

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37

CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. David Parker (Reg. No. 32,165) on August 24, 2006.

4. The application has been amended as follows:

In the claims:

Replace "random sequences" in line 16 in ii) of step b) of claim 1 with "random combinations".

38. (Currently amended) The method of claim 36, further comprising determining [at least] a [partial] nucleotide sequence of the amplified products.

60. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a different cell or tissue.

61. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cancerous cell or tissue.

62. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a pharmaceutical compound.

63. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a teratogenic compound.

64. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a

carcinogenic compound.

65. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a toxic compound.

66. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a biological response modifier.

67. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a hormone, a hormone agonist or a hormone antagonist.

68. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a cytokine.

69. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or DNA derived from a cell or tissue treated with a growth factor.

70. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a normal cell or tissue [and on] or the DNA derived from a cell or tissue treated with the ligand of a known biological receptor.

71. (Currently amended) The method of claim 20, [performed on] more than one sample of DNA are used, wherein the DNA samples are derived from a cell or tissue type obtained from different species.

72. (Currently amended) The method of claim 20, [performed on] more than one sample of DNA are used, wherein the DNA samples are derived from a cell or tissue type obtained from different organisms.

73. (Currently amended) The method of claim 20, [performed on] more than one sample of DNA are used, wherein the DNA samples are derived from a cell or tissue at different stages of development.

74. (Currently amended) The method of claim 20, [performed on] more than one sample of DNA are used, wherein the DNA samples are derived from a normal cell or tissue and derived from a cell or tissue that is diseased.

75. (Currently amended) The method of claim 20, [performed on] more than one sample of DNA are used, wherein the DNA samples are derived from a cell or tissue cultured [in vitro] *in vitro* under different conditions.

76. (Currently amended) The method of claim 20, [performed on] the DNA molecule is derived from a cell or tissue from two organisms of the same species with a known genetic difference.

5. The following is an examiner's statement of reasons for allowance:

Claims 3, 4, 20, 21, 23-42, 44-48, 50, 52-76, 85, and 86 are allowable in light of applicant's amendments filed on June 20, 2006, and the examiner's amendments. The closest prior art in the record is Senapathy (US Patent No. 6,521,428 B1, priority date: April 21, 1999). This prior art does not teach that the 5' sequence of primers of said first primer set population is complementary to said first linker sequence and 5' sequence of primers of said second primer set population is complementary to said second linker sequence as recited in claim 20. This prior art

either alone or in combination with the other art in the record does not teach or reasonably suggest a method of subjecting a DNA molecule to a DNA synthesis reaction which comprises all of the limitations recited in claim 20. Note that "a random combinations of A, T, C, and G" in amended claim 20 is considered as all possible combinations of A, T, C, and G.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is (571)273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (571)272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571)272-0735.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

September 5, 2006

FRANK LU
PRIMARY EXAMINER